

Date: Mon, 29 Nov 93 04:30:53 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V93 #94
To: Ham-Space

Ham-Space Digest Mon, 29 Nov 93 Volume 93 : Issue 94

Today's Topics:

 how easy to receive?
MIR Packet frequencies?
 ORBS\$328.2L.AMSAT
 ORBS\$328.MICRO.AMSAT
 ORBS\$328.MISC.AMSAT
 ORBS\$328.OSCAR.AMSAT
 ORBS\$328.WEATH.AMSAT
Satellites and Frequencys

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 26 Nov 1993 08:19:08 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!
xlink.net!scsing.switch.ch!aragorn.unibe.ch!news@network.ucsd.edu
Subject: how easy to receive?
To: ham-space@ucsd.edu

Hi,

I'm thinking about building a 136 MHz receiver to get the meteosats.
What kind of antenna is needed to be successfull (gain)? And is it
possible to decode the data with an ordinary weather fax converter?
Any help is appreciated.

vy 73 de Andreas HB9GAV

--

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E-Mail: wiesmann@iap.unibe.ch

Phone: +41 31 631 45 90
Fax: +41 31 631 35 65

Date: Sun, 28 Nov 93 09:52:02 GMT
From: munnari.oz.au!yarrina.connect.com.au!werple.apana.org.au!
lsupoz.apana.org.au!scs.apana.org.au!mu!jmorris@network.ucsd.edu
Subject: MIR Packet frequencies?
To: ham-space@ucsd.edu

In article <96562@cup.portal.com> Larry_L_Ledlow@cup.portal.com writes:

>This usually happens Friday/Saturday nights when they have some spare time.

Friday/Saturday nights.. in which time zone ?

JM.

--

jmorris@mu.apana.org.au
James Morris VK2GVA

Date: Wed, 24 Nov 1993 20:29:00 MST
From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!news.cyberstore.ca!
nnntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu
Subject: ORBS\$328.2L.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-328.N
2Line Orbital Elements 328.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH,TX November 24, 1993
BID: \$ORBS-328.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:

1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN

G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10

1 14129U 83058B 93321.57691393 -.00000112 00000-0 10000-3 0 2118
2 14129 27.1956 355.7539 6019652 131.0023 299.1524 2.05880635 78414

UO-11

1 14781U 84021B 93325.57000090 .00000269 00000-0 49738-4 0 6134
2 14781 97.7960 344.9183 0010964 210.4629 149.5959 14.69087530519827

RS-10/11

1 18129U 87054A 93325.49625370 .00000016 00000-0 10683-4 0 8137
2 18129 82.9207 122.3575 0010357 239.9809 120.0325 13.72326180321420

AO-13

1 19216U 88051B 93324.87971886 -.00000221 00000-0 10000-4 0 8154
2 19216 57.8676 283.0185 7211074 328.8644 3.5221 2.09724867 41647

FO-20

1 20480U 90013C 93325.97912877 -.00000005 00000-0 14514-4 0 6104
2 20480 99.0202 152.1718 0541163 89.0188 277.2925 12.83222068177550

AO-21

1 21087U 91006A 93327.46610100 .00000084 00000-0 82657-4 0 3703
2 21087 82.9432 294.9482 0034102 299.3528 60.4149 13.74528481141311

RS-12/13

1 21089U 91007A 93327.59616256 .00000030 00000-0 25224-4 0 6147
2 21089 82.9217 163.9135 0028927 323.6427 36.2770 13.74030145140417

ARSENE

1 22654U 93031B 93321.93138545 -.00000051 00000-0 10000-3 0 2108
2 22654 1.4185 113.8817 2935300 161.0091 211.2000 1.42195961 2757

UO-14

1 20437U 90005B 93324.75934626 .00000124 00000-0 55928-4 0 9139
2 20437 98.6041 47.2419 0011859 83.0955 277.1590 14.29805061199801

AO-16

1 20439U 90005D 93324.68304767 .00000084 00000-0 40260-4 0 7136
2 20439 98.6140 48.1917 0012184 83.5887 276.6705 14.29861812199805

DO-17

1 20440U 90005E 93325.21733703 .00000109 00000-0 50018-4 0 7134
2 20440 98.6142 48.9764 0012282 81.4113 278.8478 14.29999401199891

WO-18

1 20441U 90005F 93324.69934066 .00000081 00000-0 39080-4 0 7147
2 20441 98.6145 48.4799 0012824 83.2364 277.0290 14.29976777199825

LO-19

1 20442U 90005G 93325.67080327 .00000099 00000-0 46017-4 0 7135
2 20442 98.6146 49.6483 0013250 80.8874 279.3806 14.30069500199976

UO-22

1 21575U 91050B 93325.62459097 .00000132 00000-0 51577-4 0 4135
2 21575 98.4563 39.0920 0007330 184.4976 175.6161 14.36866978123272

KO-23

1 22077U 92052B 93325.56659606 .00000000 00000-0 10000-3 0 3102

2	22077	66.0893	354.6876	0005267	339.3077	20.7715	12.86281948	60088
AO-27								
1	22825U	93061C	93325.63865674	.00000077	00000-0	39483-4	0	2128
2	22825	98.6761	38.3168	0009527	93.6148	266.6130	14.27591127	8079
IO-26								
1	22826U	93061D	93325.63461159	.00000078	00000-0	39608-4	0	2130
2	22826	98.6764	38.3197	0010035	94.7836	265.4492	14.27693538	8074
KO-25								
1	22830U	93061H	93324.71104890	.00000103	00000-0	49277-4	0	2131
2	22830	98.5779	36.8642	0012529	68.2759	291.9752	14.28017671	7949
NOAA-9								
1	15427U	84123A	93321.67817478	.00000105	00000-0	66146-4	0	6128
2	15427	99.0821	4.3682	0015882	95.7490	264.5523	14.13562457460466	
NOAA-10								
1	16969U	86073A	93323.68554173	.00000096	00000-0	49118-4	0	5105
2	16969	98.5133	334.0643	0012433	218.5417	141.4895	14.24844816372776	
MET-2/17								
1	18820U	88005A	93324.77430959	.00000066	00000-0	53393-4	0	2122
2	18820	82.5425	74.3748	0017761	49.3727	310.8980	13.84697976293513	
MET-3/2								
1	19336U	88064A	93327.88606867	.00000043	00000-0	10000-3	0	2131
2	19336	82.5382	108.9623	0018510	57.6406	302.6575	13.16961911256238	
NOAA-11								
1	19531U	88089A	93323.67891070	.00000156	00000-0	94238-4	0	4100
2	19531	99.1515	302.7055	0012244	5.6990	354.4307	14.12933644265630	
MET-2/18								
1	19851U	89018A	93325.42782422	.00000019	00000-0	11488-4	0	2138
2	19851	82.5192	309.5566	0015904	88.4579	271.8419	13.84349155238948	
MET-3/3								
1	20305U	89086A	93326.70726297	.00000043	00000-0	10000-3	0	9153
2	20305	82.5547	53.0394	0017057	80.9974	279.2674	13.16023734195950	
MET-2/19								
1	20670U	90057A	93325.62861582	.00000015	00000-0	79036-5	0	7136
2	20670	82.5482	13.3392	0016493	14.8236	345.3422	13.84182354171904	
FY-1/2								
1	20788U	90081A	93325.69890385	.00000280	00000-0	20817-3	0	8184
2	20788	98.8527	347.3415	0014034	231.3920	128.6001	14.01337309164645	
MET-2/20								
1	20826U	90086A	93325.46973098	.00000030	00000-0	21632-4	0	7123
2	20826	82.5229	311.2459	0011806	272.8085	87.1723	13.83564132159033	
MET-3/4								
1	21232U	91030A	93327.43445415	.00000043	00000-0	10000-3	0	6175
2	21232	82.5444	315.0567	0013262	341.2576	18.8056	13.16458338124285	
NOAA-12								
1	21263U	91032A	93323.56678881	.00000168	00000-0	84215-4	0	8176
2	21263	98.6421	350.7456	0013768	121.7860	238.4659	14.22334412130733	
MET-3/5								
1	21655U	91056A	93327.30300481	.00000043	00000-0	10000-3	0	6148

2 21655 82.5541 262.1324 0013850 356.1728 3.9270 13.16825241109368
 MET-2/21
 1 22782U 93055A 93325.65877278 .00000101 00000-0 87052-4 0 2121
 2 22782 82.5509 10.8972 0023907 87.2237 273.1663 13.82992586 11406
 MIR
 1 16609U 86017A 93327.79016587 .00007671 00000-0 10427-3 0 5962
 2 16609 51.6171 137.6286 0005040 20.3514 339.7798 15.58667160443992
 HUBBLE
 1 20580U 90037B 93326.53889941 .00000818 00000-0 69765-4 0 3644
 2 20580 28.4673 123.5668 0004218 266.1154 93.8990 14.92930899195195
 GRO
 1 21225U 91027B 93323.10592449 .00016589 00000-0 17587-3 0 2235
 2 21225 28.4613 251.4109 0075125 111.9850 248.8518 15.58788576 24490
 UARS
 1 21701U 91063B 93320.80422262 -.00001889 00000-0 -15578-3 0 4142
 2 21701 56.9838 290.0183 0005706 92.3355 267.8337 14.96177320119131
 POSAT
 1 22829U 93 61 G 93289.11726978 .00000072 00000-0 37231-4 0 2042
 2 22829 98.6763 2.0610 0010043 184.4594 175.6498 14.27975951 2862
 /EX

 Date: Wed, 24 Nov 1993 20:21:00 MST
 From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!news.cyberstore.ca!
 nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu
 Subject: ORBS\$328.MICRO.AMSAT
 To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-328.D
 Orbital Elements 328.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS
 FROM WA5QGD FORT WORTH,TX November 24, 1993
 BID: \$ORBS-328.D
 TO ALL RADIO AMATEURS BT

Satellite: UO-14
 Catalog number: 20437
 Epoch time: 93324.75934626
 Element set: 913
 Inclination: 98.6041 deg
 RA of node: 47.2419 deg
 Eccentricity: 0.0011859
 Arg of perigee: 83.0955 deg
 Mean anomaly: 277.1590 deg
 Mean motion: 14.29805061 rev/day
 Decay rate: 1.24e-06 rev/day^2

Epoch rev: 19980
Checksum: 317

Satellite: A0-16
Catalog number: 20439
Epoch time: 93324.68304767
Element set: 713
Inclination: 98.6140 deg
RA of node: 48.1917 deg
Eccentricity: 0.0012184
Arg of perigee: 83.5887 deg
Mean anomaly: 276.6705 deg
Mean motion: 14.29861812 rev/day
Decay rate: $8.4e-07$ rev/day²
Epoch rev: 19980
Checksum: 336

Satellite: D0-17
Catalog number: 20440
Epoch time: 93325.21733703
Element set: 713
Inclination: 98.6142 deg
RA of node: 48.9764 deg
Eccentricity: 0.0012282
Arg of perigee: 81.4113 deg
Mean anomaly: 278.8478 deg
Mean motion: 14.29999401 rev/day
Decay rate: $1.09e-06$ rev/day²
Epoch rev: 19989
Checksum: 326

Satellite: W0-18
Catalog number: 20441
Epoch time: 93324.69934066
Element set: 714
Inclination: 98.6145 deg
RA of node: 48.4799 deg
Eccentricity: 0.0012824
Arg of perigee: 83.2364 deg
Mean anomaly: 277.0290 deg
Mean motion: 14.29976777 rev/day
Decay rate: $8.1e-07$ rev/day²
Epoch rev: 19982
Checksum: 348

Satellite: L0-19
Catalog number: 20442
Epoch time: 93325.67080327

Element set: 713
Inclination: 98.6146 deg
RA of node: 49.6483 deg
Eccentricity: 0.0013250
Arg of perigee: 80.8874 deg
Mean anomaly: 279.3806 deg
Mean motion: 14.30069500 rev/day
Decay rate: 9.9e-07 rev/day^2
Epoch rev: 19997
Checksum: 329

Satellite: UO-22
Catalog number: 21575
Epoch time: 93325.62459097
Element set: 413
Inclination: 98.4563 deg
RA of node: 39.0920 deg
Eccentricity: 0.0007330
Arg of perigee: 184.4976 deg
Mean anomaly: 175.6161 deg
Mean motion: 14.36866978 rev/day
Decay rate: 1.32e-06 rev/day^2
Epoch rev: 12327
Checksum: 322

Satellite: KO-23
Catalog number: 22077
Epoch time: 93325.56659606
Element set: 310
Inclination: 66.0893 deg
RA of node: 354.6876 deg
Eccentricity: 0.0005267
Arg of perigee: 339.3077 deg
Mean anomaly: 20.7715 deg
Mean motion: 12.86281948 rev/day
Decay rate: .00000000 rev/day^2
Epoch rev: 6008
Checksum: 303

Satellite: AO-27
Catalog number: 22825
Epoch time: 93325.63865674
Element set: 212
Inclination: 98.6761 deg
RA of node: 38.3168 deg
Eccentricity: 0.0009527
Arg of perigee: 93.6148 deg
Mean anomaly: 266.6130 deg

Mean motion: 14.27591127 rev/day
Decay rate: 7.7e-07 rev/day^2
Epoch rev: 807
Checksum: 323

Satellite: IO-26
Catalog number: 22826
Epoch time: 93325.63461159
Element set: 213
Inclination: 98.6764 deg
RA of node: 38.3197 deg
Eccentricity: 0.0010035
Arg of perigee: 94.7836 deg
Mean anomaly: 265.4492 deg
Mean motion: 14.27693538 rev/day
Decay rate: 7.8e-07 rev/day^2
Epoch rev: 807
Checksum: 329

Satellite: KO-25
Catalog number: 22830
Epoch time: 93324.71104890
Element set: 213
Inclination: 98.5779 deg
RA of node: 36.8642 deg
Eccentricity: 0.0012529
Arg of perigee: 68.2759 deg
Mean anomaly: 291.9752 deg
Mean motion: 14.28017671 rev/day
Decay rate: 1.03e-06 rev/day^2
Epoch rev: 794
Checksum: 315

/EX

Date: Wed, 24 Nov 1993 20:27:00 MST
From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!spool.mu.edu!caen!
destroyer!nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu
Subject: ORBS\$328.MISC.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-328.M
Orbital Elements 328.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH,TX November 24, 1993

BID: \$ORBS-328.M
TO ALL RADIO AMATEURS BT

Satellite: MIR
Catalog number: 16609
Epoch time: 93327.79016587
Element set: 596
Inclination: 51.6171 deg
RA of node: 137.6286 deg
Eccentricity: 0.0005040
Arg of perigee: 20.3514 deg
Mean anomaly: 339.7798 deg
Mean motion: 15.58667160 rev/day
Decay rate: 7.671e-05 rev/day²
Epoch rev: 44399
Checksum: 336

Satellite: HUBBLE
Catalog number: 20580
Epoch time: 93326.53889941
Element set: 364
Inclination: 28.4673 deg
RA of node: 123.5668 deg
Eccentricity: 0.0004218
Arg of perigee: 266.1154 deg
Mean anomaly: 93.8990 deg
Mean motion: 14.92930899 rev/day
Decay rate: 8.18e-06 rev/day²
Epoch rev: 19519
Checksum: 342

Satellite: GRO
Catalog number: 21225
Epoch time: 93323.10592449
Element set: 223
Inclination: 28.4613 deg
RA of node: 251.4109 deg
Eccentricity: 0.0075125
Arg of perigee: 111.9850 deg
Mean anomaly: 248.8518 deg
Mean motion: 15.58788576 rev/day
Decay rate: 1.6589e-04 rev/day²
Epoch rev: 2449
Checksum: 315

Satellite: UARS
Catalog number: 21701
Epoch time: 93320.80422262

Element set: 414
Inclination: 56.9838 deg
RA of node: 290.0183 deg
Eccentricity: 0.0005706
Arg of perigee: 92.3355 deg
Mean anomaly: 267.8337 deg
Mean motion: 14.96177320 rev/day
Decay rate: -1.889e-05 rev/day^2
Epoch rev: 11913
Checksum: 296

Satellite: POSAT
Catalog number: 22829
Epoch time: 93289.11726978
Element set: 204
Inclination: 98.6763 deg
RA of node: 2.0610 deg
Eccentricity: 0.0010043
Arg of perigee: 184.4594 deg
Mean anomaly: 175.6498 deg
Mean motion: 14.27975951 rev/day
Decay rate: 7.2e-07 rev/day^2
Epoch rev: 286
Checksum: 317

/EX

Date: Wed, 24 Nov 1993 20:18:00 MST
From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!news.cyberstore.ca!
nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu
Subject: ORBS\$328.OSCAR.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-328.0
Orbital Elements 328.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
FROM WA5QGD FORT WORTH,TX November 24, 1993
BID: \$ORBS-328.0
TO ALL RADIO AMATEURS BT

Satellite: AO-10
Catalog number: 14129
Epoch time: 93321.57691393
Element set: 211
Inclination: 27.1956 deg

RA of node: 355.7539 deg
Eccentricity: 0.6019652
Arg of perigee: 131.0023 deg
Mean anomaly: 299.1524 deg
Mean motion: 2.05880635 rev/day
Decay rate: -1.12e-06 rev/day^2
Epoch rev: 7841
Checksum: 293

Satellite: UO-11
Catalog number: 14781
Epoch time: 93325.57000090
Element set: 613
Inclination: 97.7960 deg
RA of node: 344.9183 deg
Eccentricity: 0.0010964
Arg of perigee: 210.4629 deg
Mean anomaly: 149.5959 deg
Mean motion: 14.69087530 rev/day
Decay rate: 2.69e-06 rev/day^2
Epoch rev: 51982
Checksum: 327

Satellite: RS-10/11
Catalog number: 18129
Epoch time: 93325.49625370
Element set: 813
Inclination: 82.9207 deg
RA of node: 122.3575 deg
Eccentricity: 0.0010357
Arg of perigee: 239.9809 deg
Mean anomaly: 120.0325 deg
Mean motion: 13.72326180 rev/day
Decay rate: 1.6e-07 rev/day^2
Epoch rev: 32142
Checksum: 279

Satellite: AO-13
Catalog number: 19216
Epoch time: 93324.87971886
Element set: 815
Inclination: 57.8676 deg
RA of node: 283.0185 deg
Eccentricity: 0.7211074
Arg of perigee: 328.8644 deg
Mean anomaly: 3.5221 deg
Mean motion: 2.09724867 rev/day
Decay rate: -2.21e-06 rev/day^2

Epoch rev: 4164
Checksum: 324

Satellite: FO-20
Catalog number: 20480
Epoch time: 93325.97912877
Element set: 610
Inclination: 99.0202 deg
RA of node: 152.1718 deg
Eccentricity: 0.0541163
Arg of perigee: 89.0188 deg
Mean anomaly: 277.2925 deg
Mean motion: 12.83222068 rev/day
Decay rate: $-5.0e-08$ rev/day²
Epoch rev: 17755
Checksum: 307

Satellite: AO-21
Catalog number: 21087
Epoch time: 93327.46610100
Element set: 370
Inclination: 82.9432 deg
RA of node: 294.9482 deg
Eccentricity: 0.0034102
Arg of perigee: 299.3528 deg
Mean anomaly: 60.4149 deg
Mean motion: 13.74528481 rev/day
Decay rate: $8.4e-07$ rev/day²
Epoch rev: 14131
Checksum: 287

Satellite: RS-12/13
Catalog number: 21089
Epoch time: 93327.59616256
Element set: 614
Inclination: 82.9217 deg
RA of node: 163.9135 deg
Eccentricity: 0.0028927
Arg of perigee: 323.6427 deg
Mean anomaly: 36.2770 deg
Mean motion: 13.74030145 rev/day
Decay rate: $3.0e-07$ rev/day²
Epoch rev: 14041
Checksum: 291

Satellite: ARSENE
Catalog number: 22654
Epoch time: 93321.93138545

Element set: 210
Inclination: 1.4185 deg
RA of node: 113.8817 deg
Eccentricity: 0.2935300
Arg of perigee: 161.0091 deg
Mean anomaly: 211.2000 deg
Mean motion: 1.42195961 rev/day
Decay rate: -5.1e-07 rev/day^2
Epoch rev: 275
Checksum: 241

/EX

Date: Wed, 24 Nov 1993 20:25:00 MST
From: ucsnews!sol.ctr.columbia.edu!math.ohio-state.edu!news.cyberstore.ca!
nnntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu
Subject: ORBS\$328.WEATH.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-328.W
Orbital Elements 328.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH,TX November 24, 1993
BID: \$ORBS-328.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 93321.67817478
Element set: 612
Inclination: 99.0821 deg
RA of node: 4.3682 deg
Eccentricity: 0.0015882
Arg of perigee: 95.7490 deg
Mean anomaly: 264.5523 deg
Mean motion: 14.13562457 rev/day
Decay rate: 1.05e-06 rev/day^2
Epoch rev: 46046
Checksum: 314

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 93323.68554173
Element set: 510
Inclination: 98.5133 deg

RA of node: 334.0643 deg
Eccentricity: 0.0012433
Arg of perigee: 218.5417 deg
Mean anomaly: 141.4895 deg
Mean motion: 14.24844816 rev/day
Decay rate: 9.6e-07 rev/day²
Epoch rev: 37277
Checksum: 316

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 93324.77430959
Element set: 212
Inclination: 82.5425 deg
RA of node: 74.3748 deg
Eccentricity: 0.0017761
Arg of perigee: 49.3727 deg
Mean anomaly: 310.8980 deg
Mean motion: 13.84697976 rev/day
Decay rate: 6.6e-07 rev/day²
Epoch rev: 29351
Checksum: 344

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 93327.88606867
Element set: 213
Inclination: 82.5382 deg
RA of node: 108.9623 deg
Eccentricity: 0.0018510
Arg of perigee: 57.6406 deg
Mean anomaly: 302.6575 deg
Mean motion: 13.16961911 rev/day
Decay rate: 4.3e-07 rev/day²
Epoch rev: 25623
Checksum: 308

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 93323.67891070
Element set: 410
Inclination: 99.1515 deg
RA of node: 302.7055 deg
Eccentricity: 0.0012244
Arg of perigee: 5.6990 deg
Mean anomaly: 354.4307 deg
Mean motion: 14.12933644 rev/day
Decay rate: 1.56e-06 rev/day²

Epoch rev: 26563
Checksum: 285

Satellite: MET-2/18
Catalog number: 19851
Epoch time: 93325.42782422
Element set: 213
Inclination: 82.5192 deg
RA of node: 309.5566 deg
Eccentricity: 0.0015904
Arg of perigee: 88.4579 deg
Mean anomaly: 271.8419 deg
Mean motion: 13.84349155 rev/day
Decay rate: $1.9\text{e-}07$ rev/day²
Epoch rev: 23894
Checksum: 337

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 93326.70726297
Element set: 915
Inclination: 82.5547 deg
RA of node: 53.0394 deg
Eccentricity: 0.0017057
Arg of perigee: 80.9974 deg
Mean anomaly: 279.2674 deg
Mean motion: 13.16023734 rev/day
Decay rate: $4.3\text{e-}07$ rev/day²
Epoch rev: 19595
Checksum: 320

Satellite: MET-2/19
Catalog number: 20670
Epoch time: 93325.62861582
Element set: 713
Inclination: 82.5482 deg
RA of node: 13.3392 deg
Eccentricity: 0.0016493
Arg of perigee: 14.8236 deg
Mean anomaly: 345.3422 deg
Mean motion: 13.84182354 rev/day
Decay rate: $1.5\text{e-}07$ rev/day²
Epoch rev: 17190
Checksum: 292

Satellite: FY-1/2
Catalog number: 20788
Epoch time: 93325.69890385

Element set: 818
Inclination: 98.8527 deg
RA of node: 347.3415 deg
Eccentricity: 0.0014034
Arg of perigee: 231.3920 deg
Mean anomaly: 128.6001 deg
Mean motion: 14.01337309 rev/day
Decay rate: 2.80e-06 rev/day²
Epoch rev: 16464
Checksum: 303

Satellite: MET-2/20
Catalog number: 20826
Epoch time: 93325.46973098
Element set: 712
Inclination: 82.5229 deg
RA of node: 311.2459 deg
Eccentricity: 0.0011806
Arg of perigee: 272.8085 deg
Mean anomaly: 87.1723 deg
Mean motion: 13.83564132 rev/day
Decay rate: 3.0e-07 rev/day²
Epoch rev: 15903
Checksum: 297

Satellite: MET-3/4
Catalog number: 21232
Epoch time: 93327.43445415
Element set: 617
Inclination: 82.5444 deg
RA of node: 315.0567 deg
Eccentricity: 0.0013262
Arg of perigee: 341.2576 deg
Mean anomaly: 18.8056 deg
Mean motion: 13.16458338 rev/day
Decay rate: 4.3e-07 rev/day²
Epoch rev: 12428
Checksum: 286

Satellite: NOAA-12
Catalog number: 21263
Epoch time: 93323.56678881
Element set: 817
Inclination: 98.6421 deg
RA of node: 350.7456 deg
Eccentricity: 0.0013768
Arg of perigee: 121.7860 deg
Mean anomaly: 238.4659 deg

Mean motion: 14.22334412 rev/day
Decay rate: 1.68e-06 rev/day^2
Epoch rev: 13073
Checksum: 314

Satellite: MET-3/5
Catalog number: 21655
Epoch time: 93327.30300481
Element set: 614
Inclination: 82.5541 deg
RA of node: 262.1324 deg
Eccentricity: 0.0013850
Arg of perigee: 356.1728 deg
Mean anomaly: 3.9270 deg
Mean motion: 13.16825241 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 10936
Checksum: 266

Satellite: MET-2/21
Catalog number: 22782
Epoch time: 93325.65877278
Element set: 212
Inclination: 82.5509 deg
RA of node: 10.8972 deg
Eccentricity: 0.0023907
Arg of perigee: 87.2237 deg
Mean anomaly: 273.1663 deg
Mean motion: 13.82992586 rev/day
Decay rate: 1.01e-06 rev/day^2
Epoch rev: 1140
Checksum: 308

/EX

Date: 27 Nov 1993 22:10:39 -0600
From: swrinde!cs.utexas.edu!howland.reston.ans.net!vixen.cso.uiuc.edu!
moe.ksu.ksu.edu!abc.ksu.ksu.edu!news@network.ucsd.edu
Subject: Satellites and Frequencys
To: ham-space@ucsd.edu

In article <CH09r4.n46@microsoft.com> laurahal@microsoft.com (Laura Halliday)
writes:

>

>Shameless plug: you can get all this information and lots more
>from AMSAT. Including useful introductory materials, a way cool

>journal, and lots more.

>

>73,

>laura VE7LDH

Unfortunately, I wasn't plugging anything. Just providing information to some of the others who are new to Ham Radio.

73 de N0YAX

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--- Standard Disclaimers Apply ---

End of Ham-Space Digest V93 #94
